EPA/ESD/R04-01/539
2001

EPA Superfund
Explanation of Significant Differences:

WHITEHOUSE OIL PITS
EPA ID: FLD980602767
OU 01
WHITEHOUSE, FL
07/16/2001

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

SITE: Whitehouse
BREAK: 5.9
OTHER:

July 10, 2001

78547

MEMORANDUM

SUBJECT: Explanation of Significant Differences for the Whitehouse Waste Oil Pits Site

FROM: Mark J. Fite
Remedial Project Manager
South Site Management Branch

TO: Richard D. Green
Director
Waste Management Division

The purpose of this memorandum is to present an Explanation of Significant Differences (ESD) for your concurrence for the Whitehouse Waste Oil Pits site located in Jacksonville, Duval County, Florida. Your concurrence will modify the remedy outlined in the September 24, 1998, Amended Record of Decision (AROD) for the site.

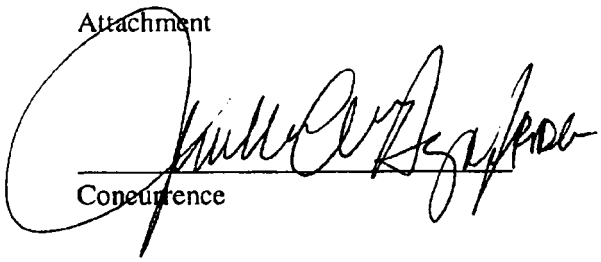
The primary change to the Whitehouse remedy proposed in the ESD is the deletion of the lime curtain from the interior of the groundwater containment system. The lime curtain was originally conceived to provide passive treatment of low pH groundwater passing through the system to raise the pH and precipitate metals before it seeped out of the containment wall. However, EPA's designers determined that this calcium-based lime curtain could have adverse effects on the sodium-based slurry wall. Groundwater modeling conducted during the design confirmed that the slurry wall would adequately contain contaminated groundwater, and natural attenuation outside the containment system would address any residual contaminants within the time frame estimated in the AROD.

Other changes discussed in the attached fact sheet result primarily from the discovery of additional contamination. A larger groundwater plume resulted in the need to increase the slurry wall size and realign more of the adjacent tributary. Additional off-site soil contamination in residential areas along McGirt's Creek identified during the design also requires additional effort and expense to excavated contaminated soil and sediment and place these materials beneath the site cap. Finally, the estimated costs of the remedy have increased because of the growth in the scope of some of the elements of the remedy and the new work associated with the McGirt's Creek cleanup.

The Florida Department of Environmental Protection (FDEP) has review the ESD and has provided their concurrence on the changes proposed. EPA and FDEP believe the remedy as set forth in the AROD and this ESD remains protective of human health and the environment.

Attached is a copy of the fact sheet that will be distributed to the public. I recommend that you concur with this ESD so that it may be added to the Administrative Record.

Attachment



Concurrence

7/16/01

Date

U. S. Environmental Protection Agency

SUPERFUND FACT SHEET

Whitehouse Waste Oil Pits

Explanation of Significant Differences

Jacksonville, Duval County, Florida ***July 2001***

The U. S. Environmental Protection Agency (EPA) is issuing this Fact Sheet for the Whitehouse Waste Oil Pits Superfund site in Jacksonville, Florida to notify the community of changes to the cleanup plan for the site.

In September 1998, EPA adopted a cleanup plan designed to isolate the Whitehouse site as a source of groundwater and surface water contamination and reduce the risks associated with exposure to the site. The Remedial Design for the site, approved by EPA in September 2000, resulted in significant changes to the 1998 cleanup plan. These changes, which do not fundamentally change the purpose or function of the cleanup, are presented in this fact sheet.

Information EPA relied on for this ***Explanation of Significant Differences*** *is available for review in the Administrative Record for the site, located at EPA's Information Repository at the Whitehouse Elementary School.*

EPA's Selected Remedy

The cleanup plan or "remedy" selected in EPA's Amended Record of Decision (ROD) dated September 24, 1998 included the following major components:

- *In situ (in place) stabilization/solidification treatment of Lifts 1 & 2*
- *Installation of a vertical barrier to isolate contaminated groundwater*
- *Installation of a lime curtain inside the containment system*
- *Construction of a low permeability cap over the contained area*
- *Realignment of the McGirts Creek tributary*
- *Extension of the municipal water supply to nearby residents and plugging of private supply wells*
- *Installation of a fence and stormwater management controls*
- *Monitored natural attenuation of groundwater contamination outside the containment system*
- *Sampling of off-site surface soil, surface water, and sediment during design to determine if additional cleanup is necessary*
- *Imposition of deed restrictions to control future land and groundwater use.*

The updated Administrative Record for the site, which includes information EPA considered in preparing this Fact Sheet, can be viewed at the following location:

Whitehouse Elementary School
11160 General Avenue
Jacksonville, FL 32220
(904) 693-7542

Explanation of Significant Differences

During the design, changes to the cleanup plan were necessary to ensure the effectiveness of the remedy. These changes were reviewed and agreed upon by the Florida Department of Environmental Protection (FDEP) before EPA's approval of the final design. A description of the changes and EPA's rationale for adopting them are summarized below:

Lime Curtain - The lime curtain has been dropped from the design. The purpose of the "lime curtain" was to raise the pH of groundwater passing through the system and remove metals from the groundwater within the containment system. However, further evaluation indicated that adding lime to the groundwater would increase the amount of calcium in the system, which could adversely affect the soil bentonite slurry wall. In addition, groundwater modeling indicated that the slurry wall would be protective without the lime curtain, and physical testing confirmed the site groundwater would not degrade the slurry wall backfill over time.

Monitoring wells will be installed outside the slurry wall in the southwest corner of the site to monitor the pH of the groundwater over time. If the pH of the groundwater outside of the wall decreases significantly, EPA will evaluate options to address the problem.

Vertical Barrier (Slurry Wall) - *The slurry wall is longer and deeper than specified in the ROD.* Sampling performed during the design revealed that groundwater contamination extends further west than previously known. As a result, the slurry wall encompasses additional contaminated groundwater both north and west of the site. The design investigation also indicated that the slurry wall needs to extend to a depth of 55 to 65 feet, rather than 40 feet as estimated in the ROD, to ensure that the wall keys into the semi-confining unit.

Capped Area - *The capped area has increased from 9 acres to 11.4 acres.* The capped area is 27% larger than estimated in the ROD due to the increased size of the containment area.

Tributary Realignment - *An additional 900 feet of the McGirts Creek tributary will be realigned.* About 1,500 feet of the creek will be realigned instead of the 600 feet estimated in the ROD because of the expansion of the cap and slurry wall to the north.

McGirt's Creek Cleanup - *Off-site contamination found during design will be excavated and disposed on site.* The ROD called for additional sampling of downstream sediment and surface soil in residential areas near the site. The results of this sampling indicated almost 6,000 cubic yards of sediment and soil exceed EPA's residential soil cleanup standards. As indicated in the ROD, this material will be excavated and disposed under the site cap.

Cost Estimate - *The cost estimate has increased by $4.5 million*. The estimated present-worth cost of the cleanup is $13 million, in contrast to $8.5 million estimated in the ROD. The key factors contributing to this increase include the growth in the size and cost of the cap; the cleanup of off-site sediment/soil contamination along McGirt's Creek; and the higher cost of stabilization/solidification treatment, in part due to the increase from 10% to 20% Portland cement to achieve performance standards.

Affirmation of Statutory Determination

Based on the information contained in the revised Administrative Record for the site, EPA and FDEP have determined that the remedy remains protective of human health and the environment, will comply with Federal and State requirements that are applicable or relevant and appropriate to this Remedial Action, and is cost effective.

For More Information

Call or write EPA's project manager for more information about the changes to the remedy or other site activities:

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U.S. EPA - Region 4
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800.435. 9234

United States
Environmental Protection
Agency

South Site
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INSIDE:
WHITEHOUSE
WASTE OIL PITS
FACT SHEET